REVIEW OF EXAMPLE SELF-INSURANCE PREMIUM ALLOCATION BY RISK MANAGEMENT AND TORT DEFENSE

A Report Prepared for the

Legislative Finance Committee

by

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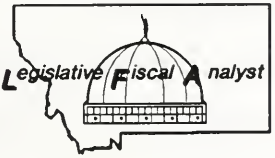
April 7, 1992



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INTRODUCTION

Language in House Bill 2 directs the Risk Management and Tort Defense Division (RMTD) of the Department of Administration to present to the Legislative Finance Committee by July 15, 1992 "...proposed changes in the method or methods of determining and allocating insurance premiums to state agencies. The division shall review with the Legislative Finance Committee the proposal and potential fiscal impacts before the rate methodology is adopted and before premiums are included in agency budget requests by the Office of Budget and Program Planning" (OBPP).

This language was adopted by the General Government appropriations subcommittee because RMTD staff testified that five factor premium allocation formula would be reviewed and possibly changed. The subcommittee was also aware that the self-insurance fund balance was declining and that not only would the method of premium allocation change, but there was a potential for premium increases as well. This report will present:

1) A brief overview of the self-insurance fund.

2) A summary of the proposed premium allocation methodology and an example of potential cost shifts between agencies.

3) Requirements of language in House Bill 2 and an analysis of the RMTD presentation.

4) Additional issues that the committee may want to discuss.

OVERVIEW

Since 1981, the state has been self-insured for general liability and automobile coverage and in 1989 Board of Investments property foreclosures, Board of Housing property foreclosures, and foster care youth insurance coverage were added. RMTD purchases commercial policies to cover other types of risks. State agencies pay premiums to RMTD

for self-insurance and commercial coverage. Premiums are deposited to the self-insurance fund to pay program operating costs and actual and potential claim expenses.

Table 1 shows the actual cash balance of the self-insurance fund for fiscal years 1986 through 1991 and the projected cash balance through fiscal 1993. The cash balance is estimated to drop to $109,173 at the end of 1993, a $4.2 million decline over the biennium.

TABLE 1

Actual and Estimated Self-Insurance Cash Balance
Fiscal Year 1986 to Fiscal Year 1993

Fiscal Year	Beginning Balance	---Revenue--- Premiums	Interest Earnings	---Expenditures--- Claims	Operating Costs	Ending Balance	Annual Increase (Decrease)
1986	$8,240,144	$3,110,444	$715,472	$1,404,794	$447,739	$10,213,527	$1,973,383
1987	10,213,527	2,428,597	632,688	5,426,107	849,073	6,999,632	(3,213,895)
1988	6,999,632	3,414,004	627,085	3,100,156	945,000	6,995,565	(4,067)
1989	6,995,565	3,896,474	578,549	3,396,219	1,891,390	6,182,979	(812,586)
1990	6,182,979	3,710,853	516,399	2,176,332	1,960,396	6,273,503	90,524
1991	6,273,503	3,763,121	594,839	3,917,004	2,321,647	4,392,812	(1,880,691)
1992	4,392,812	3,999,576	412,000	3,631,160	2,635,928	2,537,300	(1,855,512)
1993	2,537,300	4,213,193	412,000	4,354,612	2,698,708	109,173	(2,428,127)

Notes: Fiscal 1992 and 1993 data is estimated.
Source: Risk Management and Tort Defense Division, March 26, 1992.

Actuarial reviews of self-insurance program have concluded that it has an unfunded liability (cash assets will not cover potential losses). A 1986 actuarial report estimated the projected total liability at $38 million. Estimated total liability for if the self-insurance fund has declined in each of a series of actuarial reviews over the last several years. The most recent review (March 1992) by a different actuary placed total projected losses for fiscal 1981 through fiscal 1992 at $15 million ($18 million through fiscal 1993).[1] The actuarial reports attribute the

[1]These estimates represent the lowest of in a range of three actuarial projections of discounted losses. Discounted estimates assume cash is set aside to pay future claims and that set side funds earn six percent interest compounded annually. The lowest undiscounted estimate of projected losses through fiscal 1993 is $22 million.

decline in total liability to statutory changes limiting liability to $750,000 for each claim and $1.5 million for each occurrence (section 2-9-108, MCA). Division personnel also attribute the improvement: 1) more timely response to claims and lawsuits filed against the state; and 2) to the administrative philosophy of resolving claims that have merit and aggressively defending and litigating all other cases.

In fiscal 1992, agencies were billed $3.125 million in self-insurance premiums. (Agencies also paid RMTD $873,928 for commercially-purchased insurance to cover such risks as property, boilers, and aircraft). Total budgeted premium payments in fiscal 1993 are $4.2 million. If the executive wishes to fund current level operating costs and the minimum estimated discounted losses in fiscal 1994, premium income would need to be raised by about $2.5 million, or 58 percent above fiscal 1993 budgeted premiums. Fiscal 1995 premium income would need to rise about $3.0 million, or 70 percent above fiscal 1993 budgeted premiums. This premium level would provide only a limited cash balance to address the unfunded liability.

PREMIUM ALLOCATION

RMTD, in conjunction with OBPP, determines: 1) the total premium needed to fund operating costs and actual and potential claims; 2) the amount of premium that will be budgeted; and 3) allocation of total premium among agencies. RMTD has been using a five factor formula developed by staff a number of years ago to allocate self-insurance premiums (see Table 2). The 1992 actuarial review of the five factor formula found that it was inadequate for a number of reasons: 1) the formula is not responsive to current loss experience; 2) there is inadequate

tempering of large losses to spread risk across all agencies; 3) some factors are not necessarily completely correlated with an agency's exposure or claims experience; and 4) there is a more appropriate method to introduce stability into rates than the factor of ten percent of the previous year premium.

The premium allocation methodology developed by the actuary is more complex than the five factor formula. Two key components of the recommended methodology are agency loss experience and agency exposure. Loss experience is incorporated by including gross reported losses by agency over the three previous fiscal years (fiscal 1988, 1989 and 1990).[2] Agency exposure is measured by the number of FTE and the number of vehicles (converted to FTE equivalents). The methodology allows RMTD to weight the allocation of premium among agencies toward exposure or loss experience through the calculation of a weighted credibility factor. This factor is developed from a mathematical formula that includes a "K factor" which may be raised or lowered to swing premium allocation more toward agency loss experience or agency exposure. For instance, the lower the K factor, the more weight is

TABLE 2
Agency Insurance Premium Formula

Factor	Weight
1) Paid Claims Previous 5 Years	50.00%
2) Total Claims Paid Since Fiscal 1989	12.50%
3) Current FTE	12.50%
4) Agency Appropriation Compared to State Total	15.00%
5) Prior Premium	10.00%
Total	100.00%

[2]The actuary recommended gross reported losses as opposed to paid claims because payments can include losses from more than three years ago. Further, reported losses include claims that may not be paid for a number of years. The actuary believes that reported losses more accurately reflect current loss experience.

given to agency loss experience and more of the total premium is allocated to agencies with proportionally higher losses. This "swing" in the allocation methodology can produce different premium allocations for an individual agency as the K factor is changed.

Table 3 compares one option of the new methodology to the old formula, contrasting allocation of the 1992 self-insurance premium. This example is illustrative only. It reflects changes in premium allocation and does not include any increases in premium. RMTD and OBPP have not determined the premium to be included in the Executive Budget request nor the allocation formula that will be used to distribute total premium among agency budgets. Therefore, final cost shifts among agencies will vary from this example.

Table 3 shows loss experience for fiscal years 1988, 1989, and 1990 and the exposure calculation for all state agencies. For instance, the Department of Transportation (DOT) has the highest percentage of losses over the last three years (67 percent of total state losses) and also has the highest estimated exposure (25 percent of total FTE and vehicles). On the other hand, five agencies had no losses over the previous three years and 11 agencies each have fewer than 1 percent of total state FTE and vehicles.

In this illustration, five agencies would have premium allocation changes of $100,000 or more, comparing the allocation of fiscal 1992 premium between the five factor formula (old) and one version of the new formula. DOT has the largest change, showing that self-insurance premiums would increase by $428,881. The Department of Fish, Wildlife, and Parks would receive the biggest reduction--$250,894. Other agencies that would experience premium reductions are: the

University System with $176,450; Department of Social and Rehabilitation Services with $107,786; and the Department of Administration with $93,859. Agencies with premium increases that double or nearly double are: Department of Natural Resources and Conservation, Department of Family Services, Department of Agriculture, and the State Auditor.

Both RMTD and the actuary recommend capping premium changes from one year to the next. The final column on Table 3 shows the "capped" change. In this example, RMTD has limited premium changes to 12.5 percent between the old formula and the example of a new allocation. A capping mechanism minimizes the impact of a catastrophic loss on an agency's premium.

TABLE 3

Example of Premium Allocation Changes Comparing Five Factor Formula to One Example of New Rate Methodology

Agency	--Loss Experience-- Reported Losses	Distribution of Losses	--Exposure Calculation-- FTE	Vehicles	Distribution FTE/Vehicle	Premium Allocation New	Old	Difference	Capped Change
Administration	$275,637	3.46	573	21.1	2.53	$76,900	$170,759	($93,859)	$149,700
Agriculture	1,291	0.02	99	22.7	0.55	17,148	7,513	9,635	8,452
State Auditor	6,989	0.09	69	0.0	0.29	9,445	4,967	4,478	5,588
Board of Education	0	0.00	136	8.0	0.62	19,225	6,421	12,804	7,044
Commerce	216,643	2.72	338	44.6	1.68	58,275	39,406	18,869	44,332
Comm. Political Practices	0	0.00	3	0.0	0.01	420	304	116	342
Family Services	613,422	7.70	561	57.8	2.69	92,650	45,769	46,881	51,490
Fish, Wildlife, & Parks	111,475	1.40	587	953.7	7.89	159,177	410,071	(250,894)	358,812
Government*	2,138	0.03	229	1.0	0.97	29,174	10,748	18,426	12,092
Health	8,287	0.10	362	12.9	1.60	45,546	29,136	16,410	32,778
Transportation	5,359,592	67.23	1,934	3,021.8	25.31	1,364,344	935,463	428,881	1,052,396
Historical Society	0	0.00	50	0.0	0.21	6,843	2,929	3,914	3,295
Institutions	316,457	3.97	2,124	413.2	11.29	233,265	248,697	(15,432)	246,730
Justice	88,723	1.11	627	331.7	4.52	111,237	108,204	3,033	110,637
Lands	7,047	0.09	346	799.4	6.00	120,289	88,931	31,358	100,047
Labor and Industry	119,632	1.50	661	35.8	2.99	85,897	57,895	28,002	65,131
Livestock	0	0.00	119	44.2	0.75	23,082	12,052	11,030	13,559
Military Affairs	45,513	0.57	109	2.0	0.47	15,643	49,783	(34,140)	43,560
Natural Resources	362	0.00	268	44.5	1.38	39,795	18,538	21,257	20,855
Public Instruction	0	0.00	135	20.3	0.68	21,123	25,753	(4,630)	22,534
Public Service Commission	13,735	0.17	46	6.9	0.23	7,660	2,742	4,918	3,064
Revenue	58,648	0.74	804	147.0	4.22	102,457	77,587	24,870	87,286
Supreme Court	4,582	0.06	91	4.0	0.41	12,992	14,684	(1,692)	12,992
Social & Rehab. Ser.	44,470	0.56	904	31.1	3.98	96,785	204,571	(107,786)	178,999
University System	676,862	8.49	3,224	907.5	18.73	376,276	552,726	(176,450)	519,926
Total	$7,971,505	100.00	14,399	6,931	100.00	$3,125,648	$3,125,649	($1)	$3,151,641

SOURCE: "Actuarial Report to State of Montana Risk Management and Tort Defense Division Self-Insurance Fund;" Martin A. Lewis; Tillinghast, Inc.; Denver, Colorado; March 17, 1992.

NOTES:

*Government includes Legislative agencies and some elected officials.

Premium allocation shows fiscal 1992 premium allocation compared to that using one version of the new methodology. Capped change is the premium change that would occur using the example of the new methodology if all changes were capped at 12.5 percent from the fiscal 1992 allocation.

REQUIREMENTS OF HOUSE BILL 2

House Bill 2 requires RMTD to present to the Legislative Finance Committee by July 15, 1992 "...proposed changes in the method or methods of determining and allocating insurance premiums to state agencies. The division shall review with the Legislative Finance Committee the proposal and potential fiscal impacts before the rate methodology is adopted and before premiums are included in agency budget requests by the OBPP".

RMTD has presented a description of an actuarially-determined premium allocation methodology and an example of premium allocation changes between the old five factor formula and one version of the new methodology using self-insurance premium budgeted for fiscal 1992. However, RMTD and OBPP have not selected the variables that will be used in the methodology that will allocate premium in agency budgets included in the Executive Budget. RMTD has not presented a discussion of the method used to determine rates. Therefore, the changes between the methodologies used to determine rates for the 1993 and 1995 biennia, the changes in allocation of insurance premiums, and the potential fiscal impact cannot be determined or reviewed at this time.

ISSUES FOR COMMITTEE CONSIDERATION

The following issues are presented for consideration by the committee.

Fund Surplus

The most recent actuarial report recommended that a reserve (surplus) account be established for RMTD. As noted earlier, the self-insurance fund is projected to have an ending cash balance of $109,173 at the end of fiscal 1993. The unfunded liability of the self-

insurance fund is estimated to be $12.5 million ($15 million total liability less $2.5 million projected ending cash balance) as of the end of fiscal 1992.

The issues policy makers face in establishing rates to fund the self-insurance program range from large premium increases to achieve actuarial soundness versus adopting premiums that support a "pay as you go" fund balance. The danger in maintaining too low a fund balance is that more claims may come due than anticipated, necessitating a supplemental appropriation. The supplemental would be complicated if funds were recouped from all sources that pay insurance premiums. On the other hand, maintaining large surpluses may have an influence on the size of state liability established in lawsuits. The legislature will need to evaluate whether the rates recommended in the Executive Budget establish an acceptable cash and self-insurance fund balance for the 1995 biennium.

Request that RMTD Present Additional Information

The committee may wish to ask RMTD to make a follow up presentation once it finalizes premium determination and allocation for the upcoming biennium. In order to fulfill House Bill 2 language, the report should include: 1) proposed changes in the method or methods of determining and allocating insurance premiums to state agencies; and 2) the proposal and potential fiscal impacts before the rate methodology is adopted and before premiums are included in agency budgets by OBPP. The committee may also wish to ask RMTD to discuss: 1) its plan to address the self-insurance fund unfunded liability; and 2) the actual method used to determine and allocate self-insurance premiums.

Capping Premium Allocation Changes

RMTD has been reviewing the effect of various experience and exposure parameters on the difference between current and proposed agency premiums. One of the variables being evaluated is capping the change between the old and new premium allocations. The actuary and RMTD staff believe that fluctuations should be moderated and a capping mechanism will prevent a single agency from being severely penalized for a single catastrophic loss. RMTD staff have also indicated that the premium allocation method may be changed between biennia as either exposure or loss experience is more heavily weighted, causing fluctuations in agency premiums unrelated to program operating or claims costs. The committee may wish to review policy implications and fiscal impacts of capping premium changes.

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DEPARTMENT OF ADMINISTRATION
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TO: Legislative Finance Committee

FROM: Brett Dahl, Administrator BD

DATE: March 16, 1992

SUBJECT: SUMMARY OF RATE METHODOLOGY/COST ALLOCATION ALTERNATIVES

As required in H.B. 2, the Risk Management and Tort Defense Division has prepared an analysis of proposed rate methodology and cost allocation alternatives for review and discussion by the Legislative Finance Committee on April 7.

This report is a summary of an internal analysis of the self-insurance fund performed by division staff and recommendations made by an independent actuary from Tillinghast Inc.

I believe that this analysis will provide the committee with a summary of some of the division's historical funding/allocation problems and suggested alternatives.

Enclosures

c: Bob Marks
Dave Ashley
Lois Steinbeck

RISK FUNDING/ALLOCATION: AN ANALYSIS

PREPARED BY THE RISK MANAGEMENT AND TORT DEFENSE DIVISION

OVERVIEW

The Risk Management and Tort Defense Division, Department of Administration, is charged with administering a comprehensive insurance plan on behalf of state government to include self-insurance or commercial coverage that is deemed necessary and cost-effective (§ 2-9-201, MCA).

Presently, the division self-insures general liability and vehicle liability coverages and commercially insures property, boiler, fine arts, employee fidelity bond, and other coverages.

SOURCES OF FUNDS

The division is funded by proprietary revenue derived from premium assessments to state agencies, and investment earnings. Proceeds from the fund are used to pay claims and lawsuits, loss adjustment expenses (fees for contract attorneys and adjusters), and administrative overhead.

USES OF FUNDS

The division's total self-insurance costs are comprised of commercial insurance premiums, retained losses to the self-insurance fund from lawsuits/claims, loss adjustment expenses (fees for contract attorneys and adjusters), and administrative overhead.

The division's fund uses are as follows:

Self-Insurance

- Claims[1]
- Self-Insured Retentions (SIRs)[2]

Operations

- Personal Services
  - Labor
  - Supplies
  - Travel
  - Rent
  - Repair
  - Overhead
  - Contract Services[3]

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[1]Includes all property and casualty claims and lawsuits as outlined in the division risk management plan which include settlements and court awarded verdicts.

[2]SIRs (Self-Insured Retentions) are losses which the self-insurance fund pays which fall under commercial insurance deductibles (i.e., commercial property has a $150,000 deductible).

[3]Contract Services - Includes contract legal fees, adjuster fees, actuarial consulting fees, and commercial insurance contract purchases. The legislature grants authority to expend for contract services from the self-insurance fund.

COST ALLOCATION

In accordance with § 2-9-202, MCA, the Department of Administration shall apportion the costs of all insurance to individual state participants.

Cost allocation is an integral part of the division's overall risk management program. The primary purposes of allocation are:

1) To spread the costs associated with risks across all agencies of state government so that no one agency bears the burden of paying total costs of unexpected losses from its authorized budgets;

2) To promote risk control by providing incentives for management;

3) To achieve equity in risk sharing among agencies of state government;

4) To provide cost information;

Property & Casualty losses are largely unpredictable. Agencies cannot accurately forecast the frequency or severity of their losses, particularly catastrophic losses.

Costs or funding estimates are usually developed by actuaries and allocated on the basis of a combination of loss experience (number of losses and loss experience) and exposure (number of FTEs, square footage, etc.)

Example for illustrative purposes:

Allocation amount: $5,000,000 to be allocated

Agency	Experience(3 years paid losses)	Exposure(FTE)
A.	$2,000,000	550
B.	500,000	2,500
C.	3,000,000	250
D.	1,000,000	400
TOTALS	$6,500,000	3,700

If the $5,000,000 were allocated solely based on exposure, Agency B, with the most exposure (FTEs), but the best loss experience would be penalized. Conversely, Agency C, with the worst loss experience, but the least exposure would benefit.

Losses are spread among agencies and over time. Smaller agencies should not be penalized for unforeseen, catastrophic losses which occur at random.

The advantage of a methodology which blends experience and exposure bases is that it minimizes random fluctuations and more equitably distributes costs.

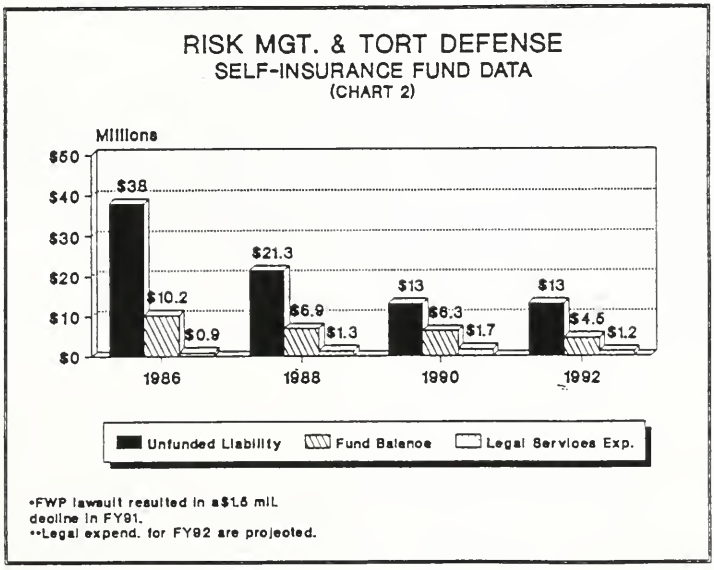
PROBLEMS WITH PRESENT FUNDING

An independent actuary from Tillinghast was retained in November 1991 to evaluate the status of the self-insurance fund. The total estimated funding requirements for FY92 and prior losses are provided as follows:

- On a discounted basis, the expected value of losses for FY92 and prior years is $15,102,203. With a projected fund balance of approximately $2,500,000 at fiscal year end, it is estimated that the self-insurance fund will have an unfunded liability of $12,500,000.

- Estimates for loss occurrences in FY94 and FY95 are respectively $3.97 million and $4.47 million. These funding requirements include costs for projected occurrences and loss adjustment expenses during these years, but do not include administrative costs.

The following chart provides a summary of unfunded liability, fund balance, and legal expense costs since FY 86.



Two important trends are noted:

1) A significant reduction in the unfunded liability of the self-insurance fund.

   The division's aggressive defense philosophy discourages plaintiffs and their attorneys from filing frivolous claims. The division presently has 107 open lawsuits compared to more than 200 in 1986.

2) A significant decline in the self-insurance fund balance since 1986. The decline in fund balance is largely due to the discrepancy between operating expenses and losses and premium collections from state agencies.

An internal summary of self-insurance fund activity (per SBAS-Statewide Budgeting and Accounting System) for prior fiscal years has been provided below:

	FY89	FY90	FY91
Judgments/Settlements	2,608,782	1,429,081	3,301,917
Loss Adjustment Exp[4]	1,441,127	1,613,358	1,323,882
Admin. Costs (SBAS)	307,163	413,966	399,407
Total[5]	4,357,072	3,456,405	5,025,206
Total Premiums Collected	3,060,251	3,408,886	3,450,290
Premium Deficiency	1,296,821	47,519	1,574,916

If loss reserves for open claims are excluded, the premium deficiency totaled $2,919,256 over the past three fiscal years. This represents a loss to the self-insurance fund in real terms of approximately $973,000 per year for each of the last 3 years. Since 1986, the self-insurance fund balance has dropped from approximately $10 million to $4.5 million at the beginning of FY92.

A summary of the projected ending fund balance for fiscal years 92 and 93 is provided on the following page.

[4]Fees for contract attorneys and adjusters.

[5]Does not include reserves on outstanding lawsuits/claims.

DEPARTMENT OF ADMINISTRATION, RISK MANAGEMENT AND TORT DEFENSE DIVISION

SELF INSURANCE FUND (A/E 06532) ESTIMATED CASH BALANCE
7/1/91 TO 6/30/93

BEGINNING CASH BALANCE JULY 1, 1991		$4,392,812
PLUS REVENUES:		
PREMIUMS INCOME	$3,999,576	
ESTIMATED INVESTMENT INCOME	412,000	
TOTAL REVENUES FY 92		4,411,576
CASH AVAILABLE FY 92		$8,804,388
LESS EXPENDITURES:		
INSURANCE LOSSES PAID TO DATE	$1,052,000	
ESTIMATED LEGAL LOSSES PAYABLE	1,475,000	
ESTIMATED PRO SE CLAIMS PAYABLE	566,854	
PROJECTED PRO SE CLAIMS PAYABLE	537,306	
OVERHEAD AND COSTS TO SETTLE	2,635,928	
TOTAL EXPENDITURES FY 92		6,267,088
CASH BALANCE JUNE 30, 1992		$2,537,300
PLUS REVENUES:		
PREMIUMS INCOME	$4,213,193	
ESTIMATED INVESTMENT INCOME	412,000	
TOTAL REVENUES FY 93		4,625,193
CASH AVAILABLE FY 93		$7,162,493
LESS EXPENDITURES:		
ESTIMATED LEGAL LOSSES PAYABLE	$3,280,000	
PROJECTED PRO SE CLAIMS PAYABLE	1,074,612	
OVERHEAD AND COSTS TO SETTLE	2,698,708	
TOTAL EXPENDITURES FY 93		7,053,320
CASH BALANCE JUNE 30, 1993		$109,173

* [illegible] - without provided claims 92 & 93
=> ACTUARIAL [illegible] PAYABLE
PRO SE = NOT IN COURT IT = HANDLED BY CLAIMANT - NO LEGAL FEE -

Funding Alternatives

1) Fund on a cash basis - Status Quo - Pay as we go! When the fund balance goes to zero, ask the legislature for a supplemental appropriation.

   This is not a viable alternative. Losses, like any other operational cost, should be projected and funded in a responsible manner. The Risk Management and Tort Defense Division at any given time has numerous lawsuits which it is defending.

   In our opinion, it is not a viable option to give contract attorneys or other contractors an IOU until supplemental funds can be obtained.

   Additionally, it is critical that the division have access to funds for settlement or litigation of cases. To do otherwise, may compromise the state's ability to settle those cases with merit consistent with legal and ethical obligations, and to vigorously defend the rest.

2) Fund on a basis which allows the division to at least cover its operating expenses, loss adjustment expenses, and its historical claims and lawsuits.

   The danger in this approach is that unforeseen, unexpected, large losses will have a more adverse impact on the fund.

3) Fund on an actuarially sound basis. This alternative would include funding at a level recommended by the state's actuary from FY92 forward. Liabilities prior to FY92 would either be unfunded or a "sinking" fund set up to "amortize" prior liabilities on a 5 to 10 year time frame. It is important to recognize, as indicated in the actuarial report, that whatever level of funding is selected, a great degree of uncertainty is attached because of the volatility of the state's liability limits and the potential for large losses to occur.

PROBLEMS WITH PRESENT ALLOCATION

General liability and vehicle liability coverages are the largest source of revenue for the division. General liability premiums are allocated to agencies and are determined at present by a five factor formula which distributes premium based on the following:

1) Paid losses for the previous five years account for 50% of the formula distribution.

2) The participant's total experience of claims since the inception of the formula accounts for 12.5% of the formula.

3) The FTE level of each participant accounts for 12.5% of the formula.

4) The formula distributes 15% of state participants based upon the participant's appropriation in comparison to the total state appropriation.

5) The participant's prior premium billing accounts for 10% of the formula.

A number of problems with the state's present allocation methodology were noted by the actuary from Tillinghast (See attachment pages 15 -17).

In summary, the five factor formula does not cap exposure, either by percentage or dollars of paid loss, the maximum amount that each agency may reasonably be expected to pay in any given year. In addition, the premiums being paid by each agency in many cases are not reflective of the agency's loss experience.

The actuary has recommended that the State adopt a formula which is actuarially sound and based upon agencies' loss experience and exposure (FTE).

Exhibit A (attached) illustrates the allocation procedure and provides a comparison of allocation by agency with the state's current allocation methodology. The following key applies:

1) Column 1 - a two-code agency description used by the Risk Management and Tort Defense Division.

2) Column 2 - description of column 1.

3) Column 3 - 88/89, 89/90, and 90/91 estimated gross reported loss and loss adjustment expenses for these occurrence periods.

4) Column 4 - distribution of loss experience by agency (i.e., Department of Administration has 3.46% of Gross reported losses in column 3).

5) Columns 5 and 6 - number of FTEs and vehicles by agency of state government.

6) Column 7 - distribution of exposures (i.e., FTEs and vehicles) by agency. Example: The Department of Administration has 2.53% of the state total.

7) Column 8 - credibility weighted experience modifier. This number is derived through actuarial calculations but is an indicator of each agencies actual losses as a percentage of expected losses based on exposure. Example: A modifier of .89 implies that

an agency's loss experience was 11% less than what would be initially expected based on that agency's exposure.

8) Column 9 - for illustrative purposes, the total amount to be allocated in this example is 3,125,648. This number represents the total amount which the Risk Management and Tort Defense Division allocated to agencies during the current fiscal year. The allocation for each agency is based upon that agency's percentage of FTEs to total FTEs and applied to the total in Column 9.

9) Column 10 - represents the experience modifier for each agency, in Column 8, multiplied by Column 9.

10) Column 11 - represents the distributed offset costs based on allocation. (Column 10 multiplied by Column 9 and divided by Column 10.) This measure is necessary to allocate the full amount (3,125,648).

11) Column 12 - represents the actual allocation for current fiscal year.

12) Column 13 - represents the difference between Columns 11 and 12. The comparison of the present method with the proposed method.

13) Column 14 - represents each agency's actual allocation capped at +/- 12.5%. Each agencies premium was capped at +/- 12.5% to minimize the transition to a new formula. In subsequent allocations, each agencies prior premium may be capped at some percentage of the prior allocation to minimize fluctuation from year to year.

    Another reason for capping increases is to provide smaller agencies with premium stability. Once again, larger agencies are better able to assimilate losses than smaller agencies.

    The rationale for a 12.5% cap are inflationary factors and industry loss trends for public entities. The cap may be lower or higher.

Finally, some agencies consist of only one entity, while others contain several. For example, the Department of Administration consists of 4 entities which are allocated insurance premiums: 1) Administration, 2) Worker's Comp Fund, 3) PERD, and 4) Teachers Retirement System.

Exhibit A-1 (attached) is a sample a breakdown of allocation for entities within the Department of Administration. The allocation is based upon each entities percentage of FTE equivalents and capped at +\-12.5%.

FINAL NOTE:

This analysis would not be complete without a final statement of risk and recognized trends. The risks which the State of Montana faces are not unique or isolated to those of other states (risk is an act, activity, or asset with a potential for loss). Risk, like any other operational cost, is a "cost of doing business," and should be funded accordingly.

The risks which the State of Montana faces day to day are considerable. The state houses dangerous prisoners and mental patients in state institutions. The state also has a legislative mandate to regulate the banking, real estate, construction, gambling, healthcare, and insurance industries, to mention just a few.

The state is responsible for constructing and maintaining thousands of miles of highway in a state that is sparsely populated with adverse weather conditions.

In addition, the state faces considerable exposure to the property which it owns. Montana is noted for its adverse climate.

A number of external factors and trends also increasingly affect the state's exposure to risk:

1) Increasing costs of litigation. The cost to the state to litigate or settle cases has increased significantly over the past decade. Court costs and attorney's fees have risen. More importantly, the medical consumer price index has increased at an annual rate of approximately 8% on average over the past decade. Medical and healthcare inflation directly affects the costs of litigation in payments to injured plaintiffs in tort actions.

2) Liability limits. The State of Montana's tort damage caps are presently set by the legislature at $750,000 per claim and $1,500,000 per occurrence. These limits are among the highest of any state in the nation. Higher limits require a higher level of funding due to uncertainty and alleged catastrophic claims.

3) Adverse Supreme Court Decisions. In Hafer vs. Melo, the U.S. Supreme Court ruled that a State employee may be held personally liable even when acting within the course and scope of employee. In wrongful discharge actions against the state, this will result in increased litigation costs for attorney's fees and perhaps punitive damages.

STATE OF MONTANA RISK MANAGEMENT
AND TORT DEFENSE DIVISION
SELF-INSURANCE FUND

ALLOCATION

DESCRIPTION OF CURRENT SYSTEM (5 Factor Formula)

According to Montana, the following is a summary of the current allocation system for general liability:

Factor 1 - Actual Payments

The actual payments that were paid to the agencies to settle the claim/case. It is important to note that this factor does not include costs incurred in settling the claim such as lawyer fees, court costs, etc. Accounts for 50% of the formula total.

Factor 2 - Agency's Total Experience of Claims

Contains all the comprehensive general liability claims with date of loss from fiscal year 88/89 to date. Accounts for 12.5% of the formula.

Factor 3 - Current Full-Time Equivalent (FTE) Level

Contains the number of current actual FTE's as of end of fiscal year 1991 (6/30/91) for each agency. Accounts for 12.5% of the total.

Factor 4 - Agency's Appropriation Compared to Total

Shows what each agency has to operate on and size of agency budget. Appropriation figures are from the 1990-1991 Budget and Appropriations Summary dated 2/90. Budget includes personnel services, operational costs, equipment, and all authorized funds from the State Appropriations Act. The appropriations also include the pay plan. Accounts for 15% of the formula.

Factor 5 - Agency's Prior Premium Billing

The amount billed to each agency for premiums in the prior fiscal year. Accounts for 10% of the formula.

COMMENTARY ON CURRENT SYSTEM

The following are specific comments regarding each part of the "Five-Factor Formula" in allocating general liability costs to various state departments and agencies.

Factor 1 - Actual Payments

Fifty percent of the allocation is based on actual payments for the previous five years. There are three disadvantages in doing this.

1) Assigning 50% weight to the latest five years' paid losses is a disadvantage because this can include payments on losses from occurrence periods greater than five years old. Thus, this technique really is giving weight to occurrences going back more

than five years. Using occurrences this old may not be reflective of prospective loss experience for an agency or department.

2) Using paid losses for 50% of the weight ignores loss reserves and, therefore, an agency's true experience may not be represented. This is particularly true for catastrophic losses since they often result in litigation and may take years to settle. Using Montana's current formula, this poor experience would not be reflected until the claim is settled.

3) There is apparently no tempering of large losses; thus the pooling mechanism is being partially defeated since an agency essentially becomes responsible for a significant portion of its own losses.

Three years of experience is an accepted time frame to use in experience rating in the insurance industry. Three years is theoretically more responsive and thus presumably results in a more accurate reflection of prospective loss experience. However, Montana may wish to continue to use five years experience due to the relative sparsity of data by agency.

Factor 2 - Agency's Total Experience of Claims

This factor, although apparently including both paid and reserve losses, has one of the disadvantages of the first factor; there is apparently no tempering of large losses Also, there is no adjustment for loss development.

Factor 3 - Current FTE Level

It is certainly appropriate to represent exposures in any allocation procedure. The degree to which exposures and experience are reflected in the allocation is a decision to be made by management. However, one would generally expect the weight given to loss experience to increase, and the weight given to exposures to decrease, as the size of the agency increases.

Factor 4 - Agency's Appropriation Compared to Total

One potential problem with this factor is that exposure to liability losses are not necessarily fully correlated with an agency's appropriation (this can be illustrated in our sample spreadsheet).

Factor 5 - Agency's Prior Premium Billing

Presumably, this factor is used as an attempt to introduce stability into the process. However, the degree of stability introduced is minimal since this factor is only given 10% weight. It would be more appropriate to introduce stability by implementing an overall cap on the change in an agency's allocation from one period to the next.